

CLAIMS:

1. A floating breakwater assembly comprising an array of elongate rods articulated to one another for extending at a substantial vertical position at least partially submersed in water, wherein said rods are made of a flexible material and
5 where the array is elastically deformable into an arcuate shape by bending the array.
2. A floating breakwater according to claim 1, wherein the rods are fixedly articulated to one another and are parallelly maintained.
3. A floating breakwater according to claim 2, wherein the rods are **articulated** to one another by a rigid **connecting element** receiving the rods with
10 their longitudinal axes extending coplanar.
4. A floating breakwater according to claim 1, wherein one or more upper rods have buoyant properties for floating at least an upper portion of the array to emerge from the water.
5. A floating breakwater according to claim 4, wherein the upper rods are
15 filled with foamed material.
6. A floating breakwater according to claim 4, wherein non-buoyant rods are suited for containing water.
7. A floating breakwater according to claim 4, wherein non-buoyant rods are hollow.
- 20 8. A floating breakwater according to claim 1, wherein at least one end of the array is anchored.
9. **A floating breakwater according to claim 8, wherein the at least one anchored end reduces vertical vector of force acting on the array.**
10. A floating breakwater according to claim 1, wherein at least one end of the
25 array is articulated to a buoy which in turn is anchored.
11. A floating breakwater according to claim 10, wherein the at least one end of the array is articulated to the buoy via a connecting element.
12. A floating breakwater according to claim 1, wherein the rods are deformed into an arced shape by a tension cable **coupling** two opposed ends of the array.

13. A floating breakwater according to claim 1, wherein the rods are elastically bowed by ends of the rods being tensioned along a tandem of the bow.
14. A floating breakwater according to claim 1, wherein the rods are elastically deformed into a bowed shape.
- 5 15. A floating breakwater according to claim 1, wherein the array is stabilized at an substantially upright floating position by a load of weight associated with a lower end thereof.
16. A floating breakwater according to claim 1, wherein a deck is fitted on an upper portion of the array of rods.
- 10 17. A floating breakwater according to claim 15, wherein the deck comprises floatable elements.
18. A floating breakwater according to claim 15, wherein the deck comprises a plurality of T-like elements, each comprising a substantially flat surface extending above water level, and a rod engaging portion for engaging with several parallel
- 15 rods.
19. A floating breakwater according to claim 18, wherein the rod engaging portion is a rigid portion formed with rod receiving apertures.
20. A floating breakwater according to claim 15, wherein the deck is integral with one or more of upper rods of the array.
- 20 21. A floating breakwater according to claim 3, wherein the **connecting element** comprises a plurality of coplanar rod-receptacles, said receptacles retaining the rods at a fixed position with respect to one another.
22. A floating breakwater according to claim 1, wherein the rods have a **tubular cross section.**
- 25 23. A floating breakwater according to claim 1, wherein each rod comprises a plurality of coaxially extending successive **rod segments** where adjoining ends of successive rod segments are coupled to one another by a **coupling element.**
24. A floating breakwater according to claim 23, wherein a coupling element is used to couple adjoining ends of rod segments of two or more rods.

- 25.** A floating breakwater according to claim **1**, wherein a first end of the array is fixedly anchored to a land portion and a second end thereof is anchored at open waters.
- 26.** A floating breakwater according to claim **25**, wherein the second end is
5 displaceable to control span and bowing of the array.
- 27.** A floating breakwater according to claim **1**, wherein ends of the array are tensionally attached to a marine vessel at open waters, whereby the vessel radially extends with respect to the rods at their bowed position.
- 28.** A floating breakwater according to claim **27**, wherein the marine vessel
10 serves as an anchor for the array and where the array concavely extends opposite blowing wind.
- 29.** A floating breakwater according to claim **1**, wherein the array is bowed so as to concavely extend opposite blowing wind, wherein an attenuated wave zone is formed.
- 30.** A floating breakwater according to claim **29**, wherein mooring
15 arrangements are provided within the bowed array.
- 31.** A floating breakwater according to claim **30**, comprising one or more mooring rods pivotally secured to the array and tiltable between a stow position and an operative position, wherein at said operative position either a stern or bow of a
20 mooring boat is secured to a free end of a mooring rod and an other of the stern or bow of the mooring boat is secured to the array.
- 32.** A floating breakwater according to claim **1**, wherein the array is formed in a circular shape, leaving an opening into a confined space formed thereby.
- 33.** A floating breakwater according to claim **23**, wherein one or more rod
25 segments of the array have different elasticity coefficients, to render the array different bending parameters.
- 34.** A floating breakwater according to claim **1**, wherein one or more retention members are provided for retaining the rods at fixed positions with respect to one another.

- 35.** A rod segment for a floating breakwater, said rod being a longitudinal element made of flexible material and being connectable at its ends to consecutive such segments.
- 36.** A rod according to claim **35**, wherein ends thereof are fixedly connectable
5 a coupling element for connecting to consecutive such segments.
- 37.** A rod according to claim **35** having a tubular cross-section.
- 38.** A rod according to claim **35**, having buoyant properties.
- 39.** A rod according to claim **35**, filled with foamed material.
- 40.** A rod according to claim **35**, being hollow to contain water.
- 10 **41.** A connecting element for a floating breakwater, said connecting element comprising a plurality of rod receptacles arranged for parallelly retaining the rods at a fixed position with respect to one another.